MEMORANDUM OF UNDERSTANDING for

Cooperation in the Areas of Meteorology, Hydrology and Oceanography

between the
National Oceanic and Atmospheric Administration
of the
Department of Commerce
of the
United States of America

and the
Federal Service for Hydrometeorology and Environmental Monitoring
(the Russian Federation)

The National Oceanic and Atmospheric Administration (NOAA) of the Department of Commerce of the United States of America and the Federal Service for Hydrometeorology and Environmental Monitoring (Roshydromet), the Russian Federation, hereinafter referred to as "the Parties":

Acting under the Agreement between the Government of the United States of America and the Government of the Russian Federation on Science and Technology Cooperation (S&T Agreement), signed in Moscow on December 16, 1993, as extended;

Recognizing the importance of scientific and technical cooperation in meteorology, hydrology and oceanography;

Recognizing that such cooperation has mutual benefits for both countries;

Considering that scientific and technological cooperation pertaining to these areas is important for the development of their respective national economies;

Desiring to establish long-term cooperation between the Parties in the fields of meteorology, hydrology and oceanography;

Understanding the importance of promoting a closer working relationship to address environmental issues of common concern;

Have agreed as follows:

ARTICLE I PURPOSE

The purpose of this Memorandum of Understanding (hereinafter - MOU) is to foster the joint pursuit of science and technology activities pertaining to meteorology, hydrology and oceanography between the Parties, taking into account the mutual interests and experience of both Parties. This MOU is subject to and governed by the S&T Agreement and any amendments, extensions or successor agreements.

The broad objective of this MOU is to facilitate cooperation to allow for the exchange of scientific resources, personnel and technical knowledge on the basis of equality, reciprocity, and mutual benefit, which support the improvement or development of meteorological, hydrologic and oceanographic research or services for both Parties.

ARTICLE II SCOPE

- 1. Cooperative activities are specific projects undertaken by NOAA, Roshydromet and any cooperating entities. Activities may include, but are not limited to, such areas as:
 - A. Activities that support the improvement of meteorological forecasts;
 - B. Activities that support the improvement of hydrological forecasts;
 - C. Activities that define the economic value of improved meteorological and hydrologic forecasts;
 - D. Activities that enhance the understanding of the role of the regional meteorology on hemispheric and global weather and climate conditions;
 - E. Activities that support an improved understanding of and ability to manage and protect the world oceans and polar regions;
 - F. Studies that support data collection, sharing, compilation and processing;
 - G. Studies that support meteorological, hydrologic, oceanographic, and climate research and observations;
 - H. Activities that allow the collaborative and mutual exchange of scientific and technical talent for the enhancement of mutual project objectives;
 - I. The conduct of appropriate meetings, workshops and conferences for the mutual exchange of scientific and technical knowledge and ideas;
 - J. Activities that support one or more international objectives as identified in international for in which NOAA and Roshydromet and cooperating entities participate; and

K. Activities that improve hydrometeorological forecasting to reduce economic, societal, and environmental losses on a national level.

ARTICLE III RESPONSIBILITIES OF THE PARTIES

- 1. The Parties are responsible for coordinating and engaging with other entities in their own countries, as appropriate and necessary for the completion of the designated tasks pursuant to this MOU.
- 2. Each Party is to provide staff, facilities, and other support necessary for implementation of projects as mutually determined by the Parties. Such support shall be subject to the availability of appropriated funds and personnel and in accordance with the laws and regulations of the providing country.
- 3. The Parties shall conduct activities based on shared responsibilities and shared results obtained in the course of equal cooperation, commensurate with the Parties' strengths and mutual interests in the fields of meteorology, hydrology and oceanography. These responsibilities may include:
 - A. Management and coordination of activities undertaken under the auspices of this MOU:
 - B. Designation of appropriate officials to manage and coordinate joint activities;
 - C. Provision of all necessary arrangements to facilitate entry to and exit from its country's territory of personnel and equipment of the other country, engaged in or used in projects under this MOU;
 - D. Provision of access, to the extent permitted by national laws and regulations, to government-sponsored or government-supported programs and institutions for visiting researchers, and, on these same conditions, access to and exchange of information and related scientific development in the field of meteorology, hydrology and oceanography;
 - E. The widest possible dissemination of research results and related information, subject to applicable international obligations, national laws, and regulations.

ARTICLE IV CONDUCT OF COOPERATION

I. All activities under this MOU, including exchange of technical information and equipment, exchange of specialists, training of scientists and technical experts, and implementation of other forms of cooperation, shall be conducted in accordance with national laws, regulations, procedures, and international obligations of the Parties. This MOU is not

intended to amend or otherwise modify existing science and technology agreements and other arrangements.

- 2. A Program of Activities (Annex I), providing specific areas for cooperation shall be established under this MOU and may be amended at any time by agreement between the Parties or their designees. The Program of Activities shall be coterminous with the duration of this MOU.
- 3. Specific projects undertaken under this MOU shall be implemented by the Line Offices of the U.S. National Oceanic and Atmospheric Administration of the U.S. Department of Commerce including, but not limited to, the National Weather Service (NWS) and the Office of Oceanic and Atmospheric Research (OAR) hereinafter referred to as the U.S. implementing agencies, for the United States of America; and the Federal Service for Hydrometeorology and Environmental Monitoring (Roshydromet), the Russian Federation, (hereinafter referred to as "the Russian Federation implementing agency").
- 4. Detailed Statements of Work (SOW) shall be agreed to on a yearly basis for projects undertaken under this MOU, by an exchange of letters between the Head of the U.S. implementing agency responsible for a project activity, for the United States of America and the Head of the Russian Federation implementing agency, for the Russian Federation.
- 5. Coordinators and working groups may be appointed, as required, to consider and act on matters related to the implementation of this MOU.
- 6. Periodic reports, as required, should be submitted to the heads of the two Parties or their designees. Such reports should outline future activity areas, represent proceedings of working groups, seminars or meetings, and document the progress and results of a particular project or program.
- 7. Scientists, technical experts, and entities of third countries or international organizations may, at their own expense unless otherwise is agreed in writing by the Parties or other cooperating entities, be invited, as mutually agreed by the Parties or other cooperating entities and in accordance with international obligations, national laws, and regulations, to participate in projects and programs being implemented under this MOU.

ARTICLE V FUNDS

All activities under this MOU shall be subject to the availability of personnel, resources, and funds. Each Party or other cooperating entity shall bear the costs of its participation in conducting activities under this MOU, unless otherwise agreed in writing. This MOU is not to be construed as obligating any particular expenditures or commitment of resources of personnel.

ARTICLE VI INFORMATION

Dissemination of Non-proprietary Scientific and Technological Information shall be in accordance with Annex II of this MOU and Annex II of the S&T Agreement.

ARTICLE VII INTELLECTUAL PROPERTY RIGHTS

The treatment of intellectual property created or furnished in the course of activities under this MOU (and business-confidential information obtained or furnished pursuant to this MOU) shall be governed by the provisions of Annex II of the S&T Agreement.

ARTICLE VIII SETTLEMENT OF DISPUTES

Any disputes concerning interpretation or implementation of this MOU or its associated Annexes shall be resolved through mutual discussion between the Parties.

ARTICLE IX NATIONAL SECURITY

- 1. The Parties agree that no information or equipment requiring protection in the interest of national security or defense or foreign relations and classified in accordance with its applicable national laws, regulations, or directives shall be provided under this Agreement. In the event it is subsequently discovered that information or equipment which is known or believed to require such protection is identified as having been created or furnished in the course of cooperative activities pursuant to this Agreement, the matter shall be brought immediately to the attention of the appropriate officials and the Parties shall consult to identify appropriate security measures to be agreed upon by the Parties, in writing, and applied to this information or equipment.
- 2. The transfer of unclassified export-controlled information or equipment between the Parties shall be in accordance with the relevant laws and regulations of each Party. If either Party deems it necessary, detailed provisions for the prevention of unauthorized transfer or retransfer of such information or equipment shall be incorporated into the appropriate project agreements or work plans. Such information or equipment shall be marked to identify it as export-controlled, and the Parties shall consult to identify appropriate restrictions or other requirements regarding the transfer of this information or equipment.

ARTICLE X
ANNEXES

Annexes I and II shall constitute an integral part of this MOU.

ARTICLE XI TERM

- 1. This MOU shall enter into force upon signature by both Parties, shall remain in force for ten (10) years, and shall be renewed automatically, for additional ten-year periods, unless either Party gives notice of termination to the other in writing at least three months prior to the expiration of the first or any subsequent ten-year period.
- 2. This MOU may be amended at any time, but only by the written agreement of the Parties.
- 3. Termination of this MOU shall not affect the implementation of activities undertaken pursuant to this MOU already in progress at the time of termination.

DONE at 1:30 PM[*], this 23rd day of June, 2005, in duplicate in the English and Russian Languages, both texts being equally authentic.

FOR THE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION OF THE DEPARTMENT OF COMMERCE UNITED STATES OF AMERICA FOR THE FEDERAL SERVICE FOR HYDROMETEORLOGY AND ENVIRONMENTAL MONITORING THE RUSSIAN FEDERATION

[*at Geneva]

ANNEX I TO MEMORANDUM OF UNDERSTANDING PROGRAM OF ACTIVITIES

NAME OF PROGRAM

This Program of Activities refers to the "Russian Federation – United States Meteorological, Hydrological and Oceanographic Program" (the Program).

CONDUCT OF WORK

The technical and procedural details covering all cooperative endeavors within this Program of Activities shall be determined by an annual exchange of letters between the Head of the Russian Federation implementing agency, for the Russian Federation, and the Head of the U.S. implementing agency responsible for project activities, for the United States of America. The Program of Activities shall include, but not be limited to, the following areas:

A. OBSERVATIONS

The implementing agencies shall provide technical support to meteorological, hydrologic and oceanographic networks in the Russian Federation.

B. TELECOMMUNICATIONS

The implementing agencies shall provide technical support to meteorological and hydrologic communication systems within the Russian Federation, as well as between the Russian Federation and the United States.

C. ANALYSIS AND FORECASTING

The implementing agencies shall provide support to meteorological and hydrologic analysis, modeling and forecasting; especially in the areas of climate and medium and short-term predictions, river and flood forecasting, and also include coordination and dissemination of forecasts, watches and warnings, synoptic discussions and mutual assistance.

D. CAPACITY BUILDING AND TRAINING

The implementing agencies shall provide support in the areas of education and training in the fields of meteorology, hydrology, oceanography, climatology, resource management and related support fields.

E. ECONOMIC ANALYSES

The implementing agencies shall provide support in facilitating the conduct of economic analyses, especially as related to the reduction of losses resulting from extreme weather events in various sectors of the Russian economy, and the value of Hydrometeorological data in the weather-dependent sectors of the Russian economy: agriculture, fuel and energy, aviation, forestry, transport, and others.

F. FIELD EXPERIMENTS

The implementing agencies shall provide support in facilitating the conduct of scientific and technical field experiments related to the fields of meteorology, hydrology and oceanography to the benefit of both Parties.

ANNEX II TO MEMORANDUM OF UNDERSTANDING INFORMATION

- 1. The Parties affirm their intention to use the information acquired under this MOU in accordance with their respective national laws and regulations.
- 2. Science and technology information of a non-proprietary nature resulting from cooperation under this MOU, other than information that is not disclosed for national security, commercial or industrial reasons, shall be made available, unless otherwise agreed, to the world scientific community through procedures established by the Parties.
- 3. The application or use of any information exchanged or transferred between any participants under this MOU shall be the responsibility of the receiving participant. The supplier does not guarantee the suitability of such information for any particular application.